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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/617,769	07/14/2003	Tsuneo Kurotori	240093US-2 DIV	4033

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EXAMINER

CHEN, SOPHIA S

ART UNIT PAPER NUMBER

2852

DATE MAILED: 02/25/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/617,769

Applicant(s)

KUROTORI ET AL.

Examiner

Sophia S. Chen

Art Unit

2852

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 8-14 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 8-10 and 12 is/are rejected.
- 7) ☒ Claim(s) 11, 13 and 14 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☒ Certified copies of the priority documents have been received in Application No. 10/050,959.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 20030714.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Specification

1. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Rejections – 35 U.S.C. §103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 8-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Itaya et al., U.S. Pat. Pub. No. 2001/0021323 A1, in view of Nishikawa et al., U.S. Pat. Pub. No. US 2001/0026713 A1.

Itaya et al. discloses a liquid developing device which applies a liquid developer consisting of a carrier liquid and toner dispersed therein (paragraph [0015]), to an elastic developing roller 42, brings the developing roller 42 by pressure into contact with a latent image carrier 1 where an electrostatic latent image is formed (paragraphs [0012] and [0017]), develops the electrostatic latent image using the liquid developer applied to the developing roller 42, and removes the toner adhering to a background portion of the latent image carrier with a sweep roller 43 (paragraph [0020]). Inherently, the developing roller 42 and the latent image carrier 1 rotate together with each other because the developing roller 42 contacts the latent image carrier 1.

Itaya et al. further discloses the developing roller 42 has liquid developer adhered to its surface when the developing roller 42 contacts the latent image carrier 2 (paragraph [0020]).

Itaya et al. differs from the instant claimed invention in not disclosing the developing roller 42 can come into contact with and separate from the latent image carrier 1.

Nishikawa discloses a liquid developing device comprising a developing roller 3 can come closer to and separate from the latent image carrier 2 (Figures 3(a) through 3(d)).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the moving mechanism as taught by Nishikawa to the developing roller and sweep roller of Itaya et al. to be capable of performing an operational sequence effectively including cleaning until a standby state of a processing device in the process of shifting from a printing operation to a standby state (Nishikawa; paragraph [0006]).

5. Applicant cannot rely upon the foreign priority papers to overcome this rejection because a translation of said papers has not been made of record in accordance with 37 CFR 1.55. See MPEP § 201.15.

6. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Itaya et al. in view of Thompson, U.S. Pat. No. 5,300,990.

Itaya et al. discloses a liquid developing device which applies a liquid developer consisting of a carrier liquid and toner dispersed therein (paragraph [0015]), to an elastic developing roller 42, brings the developing roller 42 by pressure into contact with a latent image carrier 1 where an electrostatic latent image is formed (paragraphs [0012] and [0017]), develops the electrostatic latent image using the liquid developer applied to the developing roller 42, and removes the toner adhering to a background portion of the latent image carrier with a sweep roller 43 (paragraph [0020]).

Itaya et al. further discloses a linear velocity (process speed) of the latent image carrier 1 being 300 mm/sec (paragraph [0019]).

Itaya et al. differs from the instant claimed invention in not disclosing a distance between the developing roller and the sweep roller.

Thompson discloses a liquid developing device comprising a developing roller 14; a sweep roller 15; and a distance from the developing roller 14 to the sweep roller 15 in the rotating direction of a latent image carrier 11 being 23 mm (column 7, lines 38-40).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the distance as taught by Thompson to Itaya et al. to avoid the problem of charge breakdown or dissipation in the bound image toner, resulting in loss of image integrity (Thompson; column 7, lines 41-43).

By combining the linear velocity (v) of 300 mm/sec (from Itaya et al.) and the distance (d_1) of 23 mm (from Thompson), it satisfies the following relation: $d_1/v < 0.5$.

7. Applicant cannot rely upon the foreign priority papers to overcome this rejection because a translation of said papers has not been made of record in accordance with 37 CFR 1.55. See MPEP § 201.15.

Allowable Subject Matter

8. Claims 11, 13, and 14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Other Prior Art

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Nishikawa et al., U.S. Pat. No. 6,049,684, discloses a liquid developing device comprising a developing roller; a sweep roller; and the developing roller being capable of moving closer to or separate from a latent image carrier.

Sasaki et al., U.S. Pat. No. 6,167,225, discloses a liquid developing device comprising an elastic developing roller.

Kusayanagi, U.S. Pat. No. 6,337,963, discloses a liquid developing device comprising a developing roller; a sweep roller; and the rollers being capable of moving closer to or separate from a latent image carrier.


Nishikawa, JP 11-327408, discloses a liquid developing device comprising a developing roller; a sweep roller; and the rollers being capable of moving closer to or separate from a latent image carrier.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sophia S. Chen whose telephone number is (703) 308-7617. The examiner can normally be reached on M-F (7:00-3:00) First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Arthur Grimley can be reached on (703) 308-1373. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Sophia S. Chen
Primary Examiner
Art Unit 2852

Ssc
February 2, 2004